



3M™ Speedglas™ Welding Filter Series G5TW

Product Description



The 3M™ Speedglas™ Welding Filter Series G5TW is designed to be used only with the 3M™ Speedglas™ welding helmet G5-01 and all 3M™ Speedglas™ Welding G5-03 Helmets. This Speedglas welding filter helps protect the wearer's eyes and face from sparks, spatter, harmful ultraviolet radiation (UV) and infrared radiation (IR) resulting from certain arc, and gas welding processes.

3M™ Speedglas™ Welding Filter G5TW Part no 46-0000-30TW

- Tack welding mode
- Light state shade 2.5
- Dark state 8-13
- Angle dependence class V2 (ISO 16321)
- 3M™ Speedglas™ Natural Color Technology
- Easy access to CUT and GRIND mode using TAP function.
- Locked dark state 8-13
- Four arc detection sensors
- Bluetooth™ enabled ADF
- Automatic ON/OFF

Applications

The Speedglas welding filter G5TW is designed for:

- Most welding processes, such as: MMA (Stick), MIG/MAG, TIG, Low amp TIG
- Cutting and grinding

Approvals/Standards

- ANSI / ISEA Z87.1-2020, American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
- CSA Z94.3-2020 National Standard of Canada, Eye and Face Protectors
- Manufacturer: 3M Svenska AB, Ernst Hedlunds väg 35, 785 30 Gagnef, Sweden



= Auto darkening welding filters shall be disposed of as electrical and electronic waste

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Limitations of Use

- Only use with original 3M spare parts and accessories listed in the reference leaflet and within the usage conditions given in the Technical Specification.
- The use of substitute components, decals, paint or other modifications not specified in these user instructions might seriously impair protection and may invalidate claims under the warranty or cause the product to be noncompliant with protection classifications and approvals.
- Use only with welding shields listed in the reference leaflet.
- Eye protectors worn over standard ophthalmic spectacles may transmit impacts thus creating a hazard to the wearer.
- Use of this product in applications outside its intended use, such as laser welding/cutting, may result in permanent eye injury and vision loss.
- Should the product fail to switch to the dark state in response to an arc, stop welding immediately and inspect the welding filter as described in the instructions. Continued use of a welding filter that fails to switch to the dark state may cause temporary vision loss. If the problem cannot be identified and corrected, do not use the welding filter, contact your supervisor, distributor or 3M for assistance.
- Flashing light sources (i.e. flash tube strobe lights, safety warning lights, etc.) can trigger the welding filter to start blinking even though no welding is occurring. The blinking will occur whilst in light state, the dark state will remain unaffected. This interference can occur from long distances and/or from reflected light. Welding areas should be shielded from such interference.
- Only operate the welding helmet system at temperatures between 23°F (–5°C) and 131°F (+55°C).
- Carefully check that the product is complete, undamaged and correctly assembled. Any damaged or defective parts must be replaced before each use. Check for cracks and look for light leaks. This product meets the requirements of certain industrial eyewear standards. It does not provide complete head, eye, and face protection from significant impact and penetration and are not a substitute for good safety practices and engineering controls. **Misuse may result in serious bodily injury or death.** For correct use, consult your supervisor and *User Instructions* or contact 3M Technical Service in the U.S.A. at 1-800-243-4630. In Canada, call Technical Service at 1-800-267-4414.
- When exposed to eye and face hazards, wear additional eye and/or face protectors appropriate to the hazard. ANSI Z87.1 – Occupational and Educational Eye and Face Protection, incorporated by reference in the OSHA Eye and Face Standard 29 CFR 1910.133, requires safety spectacles or goggles to be worn in conjunction with the welding helmet if the visor can be raised from the normal position during use. **Failure to do so may result in serious bodily injury or death.**
- All worn out parts, such as batteries, should be disposed of according to local regulations. The welding filter should be disposed of as electronic waste.

Materials

Welding filter:	Polyamide (PA), Glass Fiber (GF)
Protection/cover plate:	Polycarbonate (PC)
Front frame:	Polyphthalamide (PPA)

Technical Properties

Specification	Speedglas Welding Filter G5 TW
Weight	6.7 oz. (190 g)
Viewing area	2.88 x 4.30 in (73 x 109 mm)
UV/IR protection	According to shade number 13 (permanent)
Light state	Shade no. 2.5

Specification	Speedglas Welding Filter G5 TW
Dark state	Shade no. 8-13
GRIND mode	Shade no. 2.5
CUT mode	Shade no. 5
Switching time light to dark	0.1 ms (+23 °C (+73.4 °F))
Opening time dark to light	50 – 1300 ms.
Fail safe state	Shade no. 5
Battery life	1500-2000 hours
Battery type	1 x CR2450 (Lithium 3V)
Sensitivity levels	1(low) – 5(high)
Delay levels	2(short) – 5(long)
Operating Conditions	-5 °C (23 °F) to +55 °C (131 °F), RH ≤ 90%, non-condensing conditions
Welding filter without batteries	-20 °C (-4 °F) to +55 °C (131 °F), RH ≤ 90%, non-condensing conditions
Lithium batteries	Further information should be obtained from the manufacturer.
Welding filter without batteries	-30 °C (-22 °F) to +70 °C (158 °F), RH ≤ 90%, non-condensing conditions
Lithium batteries	Further information should be obtained from the manufacturer.
Expected service life	5 years depending on conditions of use. The product may continue to be used providing all visual inspections and pre-use checks are passed.

Assemblies, Accessories and Spare Parts

3M™ Speedglas™ Welding Filters	
46-0000-30TW	G5 Tack Welding ADF
3M™ Speedglas™ Replacement Parts and Accessories	
06-0200-30	Inside Protection Plate, Standard, 5 EA/Bag (G5VC and G5TW)
06-0200-40	Inside Protection Plate, Anti-fog 5 EA/Bag (G5VC and G5TW)
06-0200-51	Outside Protection Plate, Standard, 10 EA/Bag
06-0200-51-B	Outside Protection Plate, Standard, 50 EA
06-0200-52	Outside Protection Plate, Anti-Scratch, 10 EA/Bag
06-0200-52-B	Outside Protection Plate, Anti-Scratch, 50 EA
06-0200-53	Outside Protection Plate, High Temp, 10 EA/Bag
06-0200-53-B	Outside Protection Plate, High Temp, 50 EA
46-0680-00	Magnification lens holder (G5-01 helmet only)
06-0500-56	Magnification Plate 1.5x
06-0500-57	Magnification Plate 2.0x

06-0500-58	Magnification Plate 2.5x
06-0500-59	Magnification Plate 3.0x
44-0400-55	Battery Holder (G5VC and G5TW)
44-0320-00	Battery CR2450 (G5VC and G5TW)

Important Notice

The use of the 3M product described within this document assumes that the user has previous experience of this type of product and that it will be used by a competent professional. Before any use of this product, it is recommended to complete some trials to validate the performance of the product within its expected application. All information and specification details contained within this document are inherent to this specific 3M product and would not be applied to other products or environment. Any action or usage of this product made in violation of this document is at the risk of the user. Compliance to the information and specification relative to the 3M product contained within this document does not exempt the user from compliance with additional guidelines (safety rules, procedures). Compliance to operational requirements especially in respect to the environment and usage of tools with this product must be observed. The 3M group (which cannot verify or control those elements) would not be held responsible for the consequences of any violation of these rules which remain external to its decision and control. Warranty conditions for 3M products are determined with the sales contract documents and with the mandatory and applicable clause, excluding any other warranty or compensation.



Personal Safety Division

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3M PSD products are occupational use only.

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Technical Service: 1-800-243-4630
Customer Service: 1-800-328-1667
3M.com/workersafety
In Canada
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Customer Service: 1-800-364-3577
3M.ca/Safety

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Division des produits de protection individuelle

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Aux États-Unis

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Service à la clientèle : 1 800 328-1667
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Au Canada

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